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Listing of Claims

1. (Original) A compound of Formula I

$$R^1$$
— N — N — SO_2 — R^2
(I)

wherein R¹ is

$$R^3$$
 $(A)_m$
 R^4
 $(A)_m$
 $(A)_m$

R³ is hydrogen,

C₁-C₆ alkyl,

 $-(CH_2)_n$ aryl, or

- $(CH_2)_n$ heteroaryl;

R⁴ is C₁-C₆ alkyl,

 $-(CH_2)_n$ aryl, or

- $(CH_2)_n$ heteroaryl;

R⁵ and R⁶ are each independently hydrogen,

C₁-C₆ alkyl,

 $-(CH_2)_n$ aryl, or

- $(CH_2)_n$ heteroaryl;

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$$R^7$$
 is C_1 - C_6 alkyl,
- $(CH_2)_n$ aryl, or
- $(CH_2)_n$ heteroaryl;

each n is independently 0 to 6;

each m is independently 0, 1, 2, or 3;

A is alanine, leucine, isoleucine, proline, phenylalanine, glycine, tyrosine, serine, threonine, tryptophan, cysteine, methionine, valine, asparagine, glutamine, aspartic acid, lysine, glutamic acid, arginine, or histidine;

$$R^2$$
 is -(CH₂)_n-Z; and

Z is aryl, heteroaryl, cycloalkyl, C₁-C₆ alkyl,

$$H_3C CH_3$$
 CH_2
 CH_2

fluorenyl, substituted fluorenyl, substituted aryl, substituted heteroaryl, or substituted cycloalkyl,

and the pharmaceutically acceptable salts, esters, amides, and prodrugs thereof.

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2. (Currently Amended) The method A compound according to claim 4 19 wherein R¹ is

3. (Currently Amended) The method A compound according to claim 1 19 wherein R¹ is

$$R^7O$$
 $(A)_m$

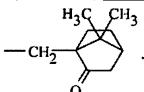
m is 0, and R^7 is $-(CH_2)_n$ aryl.

4. (Currently Amended) The method A compound according to claim 1 19 wherein R¹ is

m is 0, and R⁷ is -CH₂ aryl.

- 5. (Currently Amended) <u>The method A compound</u>-according to claim <u>4 19</u> wherein R² is -(CH₂)_n aryl.
- 6. (**Currently Amended**) <u>The method</u>. A compound according to claim 5 wherein aryl is phenyl or naphthyl.
- 7. (Currently Amended) <u>The method A compound</u> according to claim <u>1 19</u> wherein R² is -(CH₂)_n-cycloalkyl.
- 8. (Currently Amended) The method A compound according to claim 1 19 wherein R is

9. (Currently Amended) The method A compound according to claim 1 19 wherein R² is



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(Currently Amended) The method A compound according to claim 1 19 wherein R² is 10.

(Original) A compound of the Formula I 11.

$$R^{1} - \underset{H}{\overset{\text{COOH}}{\prod}} - so_{2} - R^{2}$$

wherein R² is -CH₂CH₂-aryl, -CH₂-cycloalkyl, -CH₂CH₂-cycloalkyl, or -CH₂CH₂-heteroaryl;

R1 is

$$R^{a}$$
, R^{b} , R^{c} , R

 R^a is $-(CH_2)_n$ aryl or $-(CH_2)_n$ heteroaryl;

R^b is aryl or heteroaryl;

R^c is -CH₂ aryl or aryl;

R^d is hydrogen or C₁-C₆ alkyl;

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and the pharmaceutically acceptable salts, esters, amides, and prodrugs thereof.

12. (Currently Amended) The method A compound according to claim $\frac{11}{26}$ wherein R^1 is

13. (Currently Amended) <u>The method A compound</u> according to claim <u>11 26</u> wherein R¹ is

- 14. (Currently Amended) The method A compound according to claim $\frac{11}{26}$ wherein R^e is $-(CH_2)_n$ aryl.
- 15. (Currently Amended) <u>The method A compound</u> according to claim 14 wherein aryl is phenyl or naphthyl.
- 16. (Currently Amended) <u>The method A compound</u> according to claim 13 wherein R^b is aryl.
- 17. (Currently Amended) <u>The method A compound</u> according to claim 16 wherein is aryl is phenyl.
- 18. (Currently Amended) <u>The method according to claim 19 wherein said compound is</u> selected from the group consisting of The compounds:
 - 3-Benzyloxycarbonylamino-4-oxo-5-(2-phenylmethanesulfonylamino)-pentanoic acid;
 - 3-Benzyloxycarbonylamino-4-oxo-5-(3-phenyl-propane-1-sulfonylamino)-pentanoic acid;
 - 3-Benzyloxycarbonylamino-4-oxo-5-phenyl-methanesulfonyl-amino-pentanoic acid;
 - 5-Benzenesulfonylamino-3-benzyloxycarbonylamino-4-oxo-pentanoic acid;
 - 3-Benzyloxycarbonylarnino-5-methanesulfonylamino-4-oxo-pentanoic acid;

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3-Benzyloxycarbonylamino-5-(naphthalene-1-sulfonylamino)-4-oxo-pentanoic acid;

- 3-Benzyloxycarbonylamino-5-(2-cyclohexyl-ethanesulfonylamino)-4-oxopentanoic acid;
- 3-Benzyloxycarbonylamino-5-(2-naphthalen-1-yl-ethanesulfonylamino)-4-oxopentanoic acid;
- 3-Benzyloxycarbonylamino-5-(7,7-dimethyl-2-oxo-bicyclo [2.2.1]hept-1-(R)-ylmethane sulfonylamino)-4-oxo-pentanoic acid;
- 3-Benzyloxycarbonylamino-5-(indan-1-ylmethanesulfonylamino)-4-oxo-pentanoic acid;
- 3-Benzyloxycarbonylamino-5-(9-fluoro-9H-fluoren-9-ylmethanesulfonylamino)-4-oxo-pentanoic acid;
- 3-Benzyloxycarbonylamino-5-(7,7-dimethyl-2-oxo-bicyclo [2.2.1]hept-1-(S)-ylmethane sulfonylamino)-4-oxo-pentanoic acid;
- 3-(2-Acetylamino-3-methyl-butyrylamino)-5-(7,7-dimethyl-2-oxo-bicyclo[2.2.1]hept-1-(S)-ylmethanesulfonylamino)-4-oxo-pentanoic acid;
- 3-(2-Acetylamino-propylamino)-5-(7,7-dimethyl-2-oxo-bicyclo[2.2.1]hept-1-(S)-ylmethanesulfonylamino)-4-oxo-pentanoic acid;
- 3-(1,2,3,4-tetrahydro-1-oxo-isoquinoline-2-yl)-acetanino-5-benzenesulfonyl amino-4-oxo-pentanoic acid;
- (S)-5-(Bicyclo[2.2.1]hept-1-ylmethanesulfonylamino)-4-oxo-3-[2-(1-oxo-3,4-dihydro-1H-isoquinolin-2-yl)-acetylamino]-pentanoic acid;
- (S)-4-Oxo-3-[2-(1-oxo-3,4-dihydro-1H-isoquinolin-2-yl)-acetylamino]-5-(2-phenylethanesulfonylamino)-pentanoic acid; and
- 4-Oxo-3-[2-(1-oxo-3,4-dihydro-1H-isoquinolin-2-yl)-acetylamino]-5-phenylmethane sulfonylamino-pentanoic acid;

and the pharmaceutically acceptable salts esters, amides, and prodrugs thereof.

19. (Currently Amended) A method of inhibiting interleukin-1β converting enzyme, the method comprising administering to a patient in need of inhibition of interleukin-1β converting enzyme a therapeutically effective amount of a compound of elaim 1 Formula I

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$$R^1 - N - SO_2 - R^2$$
(I)

wherein R¹ is

$$R^{3}$$
 $(A)_{m}$
 R^{4}
 $(A)_{m}$
 $(A)_{m}$

R³ is hydrogen,

- C₁-C₆ alkyl,
- -(CH₂)_n aryl, or
- -(CH₂)_n heteroaryl;

R⁴ is C₁-C₆ alkyl,

- <u>-(CH₂)_n aryl, or</u>
- -(CH₂)_n heteroaryl;

R⁵ and R⁶ are each independently hydrogen,

- C₁-C₆ alkyl,
- -(CH₂)_n aryl, or
- -(CH₂)_n heteroaryl;

R^7 is C_1 - C_6 alkyl,

- -(CH₂)_n aryl, or
- -(CH₂)_n heteroaryl;

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each n is independently 0 to 6;

each m is independently 0, 1, 2, or 3;

A is alanine, leucine, isoleucine, proline, phenylalanine, glycine,

- tyrosine, serine, threonine, tryptophan, cysteine, methionine,
- valine, asparagine, glutamine, aspartic acid, lysine, glutamic acid,
- arginine, or histidine;

R^2 is -(CH₂)_n-Z; and

Z is aryl, heteroaryl, cycloalkyl, C₁-C₆ alkyl,

$$H_3C CH_3$$
 $CH_2)_p$
 $CH_2)_p$

fluorenyl, substituted fluorenyl, substituted aryl, substituted heteroaryl, or substituted cycloalkyl,

each R^Q is independently hydrogen or C₁-C₆ alkyl;

and each p is independently 1, 2, or 3;

and the pharmaceutically acceptable salts, esters, amides, and prodrugs thereof.

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(Currently Amended) A method of inhibiting Cogness A the method comprising

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- 20. (Currently Amended) A method of inhibiting Caspase-4, the method comprising administering to a patient in need of Caspase-4 inhibition a Caspase-4 inhibiting amount of a compound of <u>Formula I of</u> claim <u>19</u>.
- 21. (Currently Amended) The A method of claim 19 wherein of treating or preventing stroke, the method comprising to a said patient had having a stroke or is having had a stroke a therapeutically effective amount of a compound of claim 1; or said patient has an inflammatory disease, septic shock, reperfusion injury, Alzheimer's disease, or shigellosis.
- 22. (**Original**) A method of treating inflammatory diseases, the method comprising administering to a patient having an inflammatory disease a therapeutically effective amount of a compound of claim 1.
- 23. (Currently Amended) The method of claim 22 21 wherein the inflammatory disease is arthritis or inflammatory bowel syndrome.
- 24. (**Original**) The method of claim 22 wherein the inflammatory disease inflammatory bowel disease.
- 25. (**Original**) A pharmaceutically acceptable composition that comprises a compound of claim 1.
- 26. (Currently Amended) A method of inhibiting interleukin-1β converting enzyme, the method comprising administering to a patient in need of inhibition of interleukin-1β converting enzyme a therapeutically effective amount of a compound of elaim 11 Formula I

$$R^1 - N \longrightarrow N - SO_2 - R^2$$

wherein R² is -CH₂CH₂-aryl, -CH₂-cycloalkyl, -CH₂CH₂-cycloalkyl, or

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-CH2CH2-heteroaryl;

 R^a is $-(CH_2)_n$ aryl or $-(CH_2)_n$ heteroaryl;

R^b is aryl or heteroaryl;

R^c is -CH₂ aryl or aryl;

R^d is hydrogen or C₁-C₆ alkyl;

Re is -CH2 aryl or -CH2 heteroaryl;

and the pharmaceutically acceptable salts, esters, amides, and prodrugs thereof.

- 27. (Currently Amended) A method of inhibiting Caspase-4, the method comprising administering to a patient in need of Caspase-4 inhibition a Caspase-4 inhibiting amount of a compound of <u>Formula I of</u> claim <u>11 26</u>.
- 28. (Currently Amended) The A method according to claim 26 wherein of treating or preventing stroke, the method comprising administering to a said patient had having a stroke or is having had a stroke a therapeutically effective amount of a compound of claim 11; or said patient has an inflammatory disease, septic shock, reperfusion injury, Alzheimer's disease, or shigellosis.

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29. (**Original**) A method of treating or preventing stroke, the method comprising administering to a patient having had a stroke or having a stroke a therapeutically effective amount of a compound of claim 11.

- 30. (Currently Amended) <u>The A method of claim 29_28</u> wherein the inflammatory disease is arthritis or inflammatory bowel disease.
- 31. (**Original**) The method of claim 29 wherein the inflammatory disease is inflammatory bowel disease.
- 32. (**Original**) A pharmaceutically acceptable composition that comprises a compound of claim 11.
- 33. (**Original**) A method of treating septic shock, the method comprising administering to a patient having septic shock a therapeutically effective amount of a compound of claim 1.
- 34. (**Original**) A method of treating septic shock, the method comprising administering to a patient having septic shock a therapeutically effective amount of a compound of claim 11.
- 35. (**Original**) A method of treating reperfusion injury, the method of comprising administering to a patient having reperfusion injury a therapeutically effective amount of a compound of claim 1.
- 36. (**Original**) A method of treating reperfusion injury, the method of comprising administering to a patient having reperfusion injury a therapeutically effective amount of a compound of claim 11.
- 37. (**Original**) A method of treating Alzheimer's disease, the method of comprising administering to a patient having Alzheimer's disease a therapeutically effective amount of a compound of claim 1.
- 38. (Original) A method of treating Alzheimer's disease, the method of comprising administering to a patient having Alzheimer's disease a therapeutically effective amount of a compound of claim 11.

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- 39. (**Original**) A method of treating shigellosis, the method comprising administering to a patient having shigellosis a therapeutically effective amount of a compound of claim 1.
- 40. (**Original**) A method of treating shigellosis, the method comprising administering to a patient having shigellosis a therapeutically effective amount of a compound of claim 11.
- 41. (Original) A compound of the Formula II

$$R^{1} - N \longrightarrow N - SO_{2} - CH_{2} \longrightarrow N$$

wherein

R¹ is

$$R^{a}$$
, R^{b} , R^{c} , R

 R^a is $-(CH_2)_n$ -aryl or $-(CH_2)_n$ heteroaryl;

R^b is aryl or heteroaryl;

R^c is -CH₂ aryl or aryl;

R^d is hydrogen or C₁-C₆ alkyl;

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Re is -CH₂ aryl or -CH₂ heteroaryl; and

the pharmaceutically acceptable salts, esters, amides, and prodrugs thereof.

42. (Currently Amended) <u>The method A compound</u> according to claim 41 48 wherein R¹ is

43. (Currently Amended) The method A compound according to claim 41 48 wherein R¹ is

- 44. (Currently Amended) The method A compound according to claim 41 $\underline{48}$ wherein R^e is $-(CH_2)_n$ aryl.
- 45. (Currently Amended) <u>The method A compound</u> according to claim 41 <u>48</u>wherein aryl is phenyl or naphthyl.
- 46. (Currently Amended) The method A compound according to claim 41 48 wherein R^b is aryl.
- 47. (Currently Amended) <u>The method A compound</u> according to claim 46 wherein is aryl is phenyl.
- 48. (Currently Amended) A method of inhibiting interleukin-1β converting enzyme, the method comprising administering to a patient in need of inhibition of interleukin-1β converting enzyme a therapeutically effective amount of a A compound of the Formula II

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$$R^{1} - N \longrightarrow N - SO_{2} - CH_{2} \longrightarrow N$$

wherein

R^a is -(CH₂)_n-aryl or -(CH₂)_n heteroaryl;

R^b is aryl or heteroaryl;

Rc is -CH2 aryl or aryl;

Rd is hydrogen or C1-C6 alkyl;

Re is -CH2 aryl or -CH2 heteroaryl; and

the pharmaceutically acceptable salts, esters, amides, and prodrugs thereof.

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49. (Currently Amended) A method of inhibiting Caspase-4, the method comprising administering to a patient in need of Caspase-4 inhibition a Caspase-4 inhibiting amount of a compound of Formula I of claim 41 48.

- 50. (Currently Amended) The A-method of claim 48 wherein of treating or preventing stroke, the method comprising administering to a said patient had having a stroke or is having had a stroke a therapeutically effective amount of a compound of claim 41; or said patient has an inflammatory disease, septic shock, reperfusion injury, Alzheimer's disease, or shigellosis.
- 51. (Original) A method of treating inflammatory diseases, the method comprising administering to a patient having an inflammatory disease a therapeutically effective amount of a compound of claim 41.
- 52. (Currently Amended) The method of claim <u>51-50</u> wherein the inflammatory disease is arthritis <u>or inflammatory bowel disease</u>.
- 53. (**Original**) A method of treating septic shock, the method comprising administering to a patient having septic shock a therapeutically effective amount of a compound of claim 41.
- 54. (**Original**) A method of treating reperfusion injury, the method comprising administering to a patient having reperfusion injury a therapeutically effective amount of a compound of claim 41.
- 55. (**Original**) A method of treating reperfusion injury, the method comprising administering to a patient having reperfusion injury a therapeutically effective amount of a compound of claim 41.
- 56. (Original) A method of treating Alzheimer's disease, the method of comprising administering to a patient having Alzheimer's disease a therapeutically effective amount of a compound of claim 41.
- 57. (**Original**) A method of treating shigellosis, the method comprising administering to a patient having shigellosis a therapeutically effective amount of a compound of claim 41.

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58. (Currently Amended) The method according to claim 19 wherein said compound is selected from the group consisting of the compounds:

- 3-[2-(2-Benzyloxycarbonylamino-3-methyl-butyrylamino)-propionylamino]4-oxo-5-(2-phenyl-ethanesulfonylamino)-pentanoic acid;
- 3-[2-(2-Benzyloxycarbonylamino-4-carboxy-butyrylamino)-3-methyl-butyrylamino]-4-oxo-5-(2-phenyl-ethanesulfonylamino)-pentanoic acid;
- 3-{2-[4-Carboxy-2-(3-phenyl-propionylamino)-butyrylamino]-3-methyl-butyryl-amino}-4-oxo-5-(2-phenyl-ethanesulfonylamino)-pentanoic acid;
- 3-[2-(2-Benzyloxycarbonylamino-3-methyl-butyrylamino) propionylamino]-5-(7,7-dimethyl-2-oxo-bicyclo[2.2.1]hept-1-ylmethanesulfonylamino)-4-oxo-pentanoic acid;
- 3-[2-(2-Benzyloxycarbonylamino-4-carboxy-butyrylamino)-3-methyl-butyrylamino]-5-(7,7-dimethyl-2-oxo-bicyclo[2.2.1]hept-1-ylmethanesulfonylamino)-4-oxo-pentanoic acid;
- 3-{2-[4-Carboxy-2-(3-phenyl-propionylamino)-butyrylamino]-3-methyl-butyrylamino}-5-(7,7-dimethyl-2-oxo-bicyclo[2.2.1]hept-1-ylmethanesulfonylamino)-4-oxo-pentanoic acid;
- 3-(2-{2-[2-Acetylamino-3-(4-hydroxy-phenyl)-propionylamino]-4-carboxy-butyrylamino}-3-methyl-butyrylamino)-5-(7,7-dimethyl-2-oxo-bicyclo[2.2.1] hept-1-ylmethanesulfonylamino)-4-oxo-pentanoic acid; and
- 3-(2-{2-[2-Acetylamino-3-(4-hydroxy-phenyl)-propionylamino]-4-carboxy-butyrylamino}-3-methyl-butyrylamino)-4-oxo-5-(2-phenyl-ethanesulfonylamino)-pentanoic acid:

and pharmaceutically acceptable salts, esters, amides, and prodrugs thereof.